

9 Nevada

Smarter Balanced

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9 PRINTED TESTS



2 ONLINE TESTS



Use these two additional online practice tests
for **extra review** after the printed tests in this book.



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



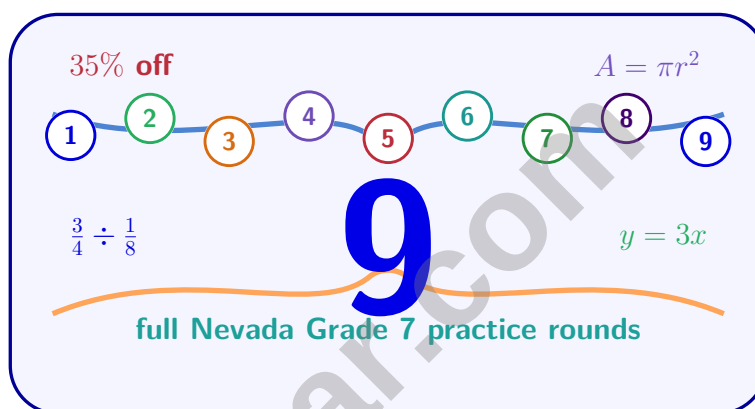
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Nevada Smarter Balanced Grade 7 Math Practice Tests

Standards-Aligned Nevada Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Nine complete 40-question Grade 7 Smarter Balanced practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Nevada Grade 7 Problem Solver!

Nine focused rounds for sharper Smarter Balanced math thinking

This book gives you nine full Grade 7 Smarter Balanced math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Nevada Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A nine-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Nevada review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Nine Smarter Balanced tests, 360 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Tests 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.

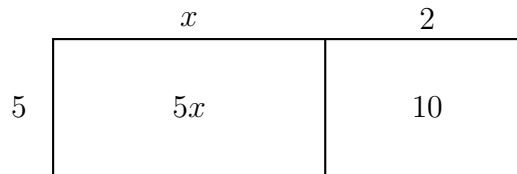


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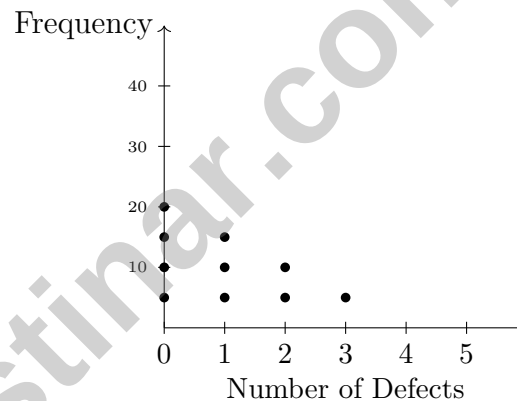
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- 1) The rectangle below is divided into two regions to model $5(x + 2)$. What is the total area?



- ☐ A. $5x + 10$
☐ C. $7x$
☐ B. $5x + 2$
☐ D. $x + 7$
- 2) A random sample of 10 items was taken from a production line. The dot plot shows the frequency of defects per item:



Note: The column above 0 has 4 dots, column above 1 has 3 dots, column above 2 has 2 dots, column above 3 has 1 dot. Total: 10 items. Based on this sample of 10, what is the experimental probability that an item has no defects?

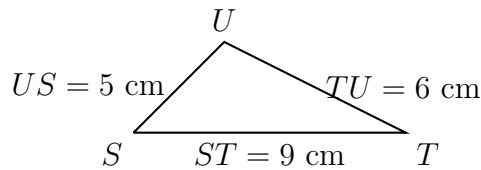
- ☐ A. $\frac{4}{10}$
☐ C. $\frac{1}{5}$
☐ B. 0.45
 ☐ D. 0.60



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- 3) A triangular prism has a triangular base with area 15 cm^2 and a height of 10 cm. What is its volume?

- ☐ A. 25 cm^3 ☐ C. 150 cm^3
☐ B. 75 cm^3 ☐ D. 300 cm^3



4)

Triangle STU has sides $ST = 9$, $TU = 6$, $US = 5 \text{ cm}$. Which type is it?

- ☐ A. Acute ☐ C. Obtuse
☐ B. Right ☐ D. Impossible
- 5) If the radius of a circle is 12 units, how many times larger is the diameter than the radius?
- ☐ A. 1 time ☐ C. 3 times
☐ B. 2 times ☐ D. 4 times
- 6) A student borrows \$2500 for a bike at 9% simple interest per year. If the loan must be repaid in 18 months, how much interest will the student pay?
- ☐ A. \$225 ☐ C. \$450
☐ B. \$675 ☐ D. \$337.50



7) A photo is 8 inches wide and 6 inches tall. It is enlarged by a scale factor of 2.5. What are the new dimensions?

☐ A. 5.5 inches $\times$ 3.5 inches

☐ C. 16 inches $\times$ 12 inches

☐ B. 10 inches $\times$ 8 inches

☐ D. 20 inches $\times$ 15 inches

8) A gym membership costs \$75 per month. You pay for 12 months, which totals \$900. What is 20% of the total cost?

☐ A. \$300

☐ C. \$280

☐ B. \$250

☐ D. \$180

9) What is $-10 + 5 + (-3)$?

☐ A. -18

☐ C. 8

☐ B. 18

☐ D. -8

10) A spinner is divided into 6 equal sections. Three sections are labeled A, two are labeled B, and one is labeled C. If the spinner is spun twice, what is the probability of spinning A on the first spin and B on the second spin?

11) A car travels at a constant speed. After 2 hours, it has gone 110 miles. After 5 hours, it has gone 275 miles. Is the distance proportional to time?

☐ A. Cannot determine

☐ C. Only after 3 hours

☐ B. No

☐ D. Yes



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1) A student claims that $\frac{7}{10}$ mile in $\frac{1}{5}$ hour equals $\frac{7}{50}$ mph. What is the student's error?

- ☐ A. Multiplied fractions directly instead of flipping and multiplying
- ☐ B. Forgot to flip the numerator
- ☐ C. Forgot to simplify the final answer
- ☐ D. Did not flip the fraction in the denominator before multiplying

2) A student observes that the points $(0, 0)$, $(1, 2)$, and $(2, 4)$ all lie on a straight line. What is the equation of this line?

- ☐ A. $y = x + 2$
- ☐ B. $y = 2x + 1$
- ☐ C. $y = x$
- ☐ D. $y = 2x$

3) A runner covers 3 miles in 30 minutes. At this rate, how many miles does the runner cover per minute?

- ☐ A. 30 miles per minute
- ☐ B. 0.5 miles per minute
- ☐ C. 10 miles per minute
- ☐ D. 0.1 miles per minute

4) A car's fuel consumption is 25 miles per gallon. If the relationship is expressed as $d = kg$ where d is distance (miles) and g is gallons used, what is the constant of proportionality?

- ☐ A. $k = 50$ miles per half-gallon
- ☐ B. $k = \frac{1}{25}$ gallons per mile
- ☐ C. $k = 0.04$
- ☐ D. $k = 25$ miles per gallon

5) Which expression is simplified?

- ☐ A. $3x + 2x - y$
- ☐ B. $5x + 2x - y + y$
- ☐ C. $5x - y$
- ☐ D. $2x + 3x + 4y$



6) Solve: $1.5x - 3 \leq 4.5$

☐ A. $x \leq 5$

☐ C. $x < 5$

☐ B. $x \geq 5$

☐ D. $x \leq 4.5$

7) A bank charges a \$5 monthly fee plus \$0.10 per check written. If a customer writes 30 checks in a month, what is the total charged in fees?

8) If $x \div (-2) = 6$, find x .

9) A square pyramid has base side 9 m and slant height 12 m. What is the total surface area?

☐ A. 81 m^2

☐ C. 297 m^2

☐ B. 216 m^2

☐ D. 378 m^2

10) A survey asks: "How many hours did you study for math?" This is a:

☐ A. Biased question

☐ C. Leading question

☐ B. Neutral question

☐ D. Voluntary response question



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Savings for Emergency Fund	\$3,600
Savings for Vacation	\$1,200

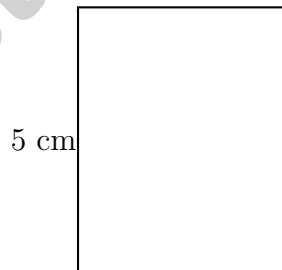
1)

A savings account is divided into two goals: emergency fund (\$3 600) and vacation savings (\$1 200). What percentage of the total savings is allocated to the vacation fund?

☐ A. 20%☐ C. 30%☐ B. 33%☐ D. 25%

2) A student's account balance is \$125.75. She makes purchases of \$42.50, \$18.25, and \$21.00. Then she deposits a check for \$75.50. What is her final balance?

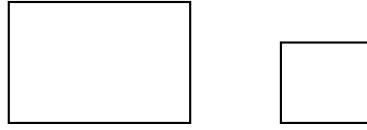
Scale: 1 cm : 5 cm



3)

A student calculated the actual area by multiplying $4 \times 5 \times 5 = 100 \text{ cm}^2$ instead of correctly squaring the scale factor. What is the correct actual area?

☐ A. 100 cm^2 ☐ C. 400 cm^2 ☐ B. 200 cm^2 ☐ D. 500 cm^2 



Drawing A: 3×2 in
Scale: 1 in : 4 ft Drawing B
Same room

4)

Two drawings of the same rectangular room are shown. If Drawing A uses scale 1 in : 4 ft and is 3×2 in, what is the scale of Drawing B if it shows 1.5×1 in?

☐ A. 1 in : 2 ft☐ C. 1 in : 4 ft☐ B. 1 in : 8 ft☐ D. 2 in : 1 ft

5) A cube is sliced diagonally such that the cutting plane passes through two opposite edges (not just vertices). What is the maximum number of sides the cross-section can have?

☐ A. 3☐ C. 5☐ B. 4☐ D. 6

6) Angle P and angle Q are vertical angles. If angle $P = 84^\circ$, what is the measure of angle Q ?

☐ A. 6° ☐ C. 276° ☐ B. 96° ☐ D. 84° 

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Nevada Smarter Balanced Grade 7 Practice Test Answer Keys

How to use this section with a Grade 7 student:

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Nevada Smarter Balanced practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.EE.1-7.EE.2) The rectangle shows two parts: $5x$ and 10 . Total: $5x + 10$.
- 2) **Choice A is correct.** (7.SP.6) From the dot plot, 0 defects appears 4 times. Total items in sample: $4 + 3 + 2 + 1 = 10$. Experimental probability of no defects: $\frac{4}{10} = \frac{2}{5} = 0.40$.
- 3) **Choice C is correct.** (7.G.4-7.G.6) Volume of a prism = base area $\times$ height = $15 \times 10 = 150 \text{ cm}^3$.
- 4) **Choice C is correct.** (7.G.1-7.G.5) Check the longest side: $9^2 = 81$ vs. $6^2 + 5^2 = 36 + 25 = 61$. Since $81 > 61$, the square of the longest side exceeds the sum of squares of the other two. The angle opposite the longest side is obtuse.
- 5) **Choice B is correct.** (7.G.4-7.G.6) The diameter is always 2 times the radius: $d = 2r$.
- 6) **Choice D is correct.** (7.RP.3) STEP 1: Convert 18 months to years: $t = 18 \div 12 = 1.5$ years. STEP 2: $I = 2500 \times 0.09 \times 1.5 = \337.50 .
- 7) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each dimension by the scale factor: $8 \times 2.5 = 20$ inches; $6 \times 2.5 = 15$ inches.
- 8) **Choice D is correct.** (7.RP.3) Total cost is $75 \times 12 = 900$ dollars. 20% of 900 is $0.20 \times 900 = 180$ dollars.
- 9) **Choice D is correct.** (7.NS.1b) Step-by-step: $-10 + 5 = -5$, then $-5 + (-3) = -8$. Or combine negatives first: $-10 + (-3) = -13$, then $-13 + 5 = -8$.
- 10) **The correct answer is $\frac{1}{6}$.** (7.SP.5-7.SP.8) Each spin is independent. $P(A) = \frac{3}{6} = \frac{1}{2}$ and $P(B) = \frac{2}{6} = \frac{1}{3}$, so $P(A \text{ then } B) = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$.
- 11) **Choice D is correct.** (7.RP.1-7.RP.3) Check the constant-of-proportionality across rows: $\frac{110}{2} = 55$ mph and $\frac{275}{5} = 55$ mph. The ratio is constant, so distance is proportional to time.
- 12) **The correct answer is 30.** (7.SP.5-7.SP.8) Each section has theoretical probability $\frac{1}{8}$. Expected frequency: $\frac{1}{8} \times 240 = 30$ times.
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) Cost equals the daily rate times the number of days. The equation is $T = 25d$.
- 14) **Choice D is correct.** (7.RP.3) Discount: $\frac{15}{100} \times 120 = 18$. Sale price: $120 - 18 = \$102$.
- 15) **Choice A is correct.** (7.RP.3) Miscellaneous = $(100\% - 50\% - 20\% - 15\% - 10\%) \times \$1,500 = 5\% \times 1500 = \75 .
- 16) **Choice B is correct.** (7.EE.1-7.EE.2) Add the exponents when multiplying same bases: $2^4 \cdot 2^2 = 2^{4+2} = 2^6 = 64$.
- 17) **Choice C is correct.** (7.EE.4a) Distribute both sides: $4(2x) + 4(1) = 3(x) + 3(8) \Rightarrow 8x + 4 = 3x + 24$. Subtract $3x$: $5x + 4 = 24$. Subtract 4: $5x = 20$. Divide by 5: $x = 4$. Verify: $4(2 \cdot 4 + 1) = 4(9) = 36$ and $3(4 + 8) = 3(12) = 36$. ✓
- 18) **Choice C is correct.** (7.G.1-7.G.5) Map length: $450 \div 15 = 30$ cm.
- 19) **Choice B is correct.** (7.SP.1-7.SP.4) Sum = $2(2) + 3(3) + 4(4) + 5(2) + 6(1) = 4 + 9 + 16 + 10 + 6 = 45$. Count = 12. Mean = $\frac{45}{12} \approx 3.75 \approx 3.8$ goals.
- 20) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{6}{3/5} = 6 \times \frac{5}{3} = 10$ dollars per pound.
- 21) **The correct answer is A,C.** (7.G.4-7.G.6) Option A is correct (60 m^2). Option C is correct (18 m^2). The true total is $60 + 18 = 78 \text{ m}^2$, so D and
- 22) **Choice D is correct.** (7.NS.1-7.NS.3) Starting at 1 and moving right 3 units represents adding 3, so $1 + 3 = 4$.
- 23) **Choice B is correct.** (7.NS.1-7.NS.3) $8^2 = 64$ and $9^2 = 81$. Since 75 is closer to 81 than to 64, $\sqrt{75} \approx 8.66$, which rounds to 9.
- 24) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $3f + 11 - f + 2 = (3f - f) + (11 + 2) = 2f + 13$.
- 25) **Choice B is correct.** (7.G.1-7.G.5) Points on the line $y = x$ map to themselves under reflection over $y = x$. Since $(3, 3)$ lies on this line, it is its own image.
- 26) **The correct answer is 30.** (7.RP.1-7.RP.3) Hourly rate = $180 \div 6 = 30$ dollars per hour.
- 27) **Choice B is correct.** (7.G.1-7.G.5) Cross-multiply: $12a = 8 \times 9 = 72$, so $a = 6$.
- 28) **Choice D is correct.** (7.SP.5-7.SP.8) Option D: $0.4 + 0.4 + 0.3 = 1.1 \neq 1$, so it is not valid. All other options sum to 1.
- 29) **Choice A is correct.** (7.NS.2) The diagram shows 4 groups of 1 chip each, totaling 4 chips. This represents $4 \times 1 = 4$.



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Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** full-length Math practice tests and **2** online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

Perfect for classroom use, homework, test preparation, and extra practice at home.

THIS BOOK INCLUDES:

9 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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